

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number  
**WO 2005/095089 A1**

(51) International Patent Classification<sup>7</sup>: **B29C 65/02**,  
B29B 13/02, B31B 19/84, A61J 1/10

(21) International Application Number:  
PCT/JP2005/006526

(22) International Filing Date: 28 March 2005 (28.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2004-097452 30 March 2004 (30.03.2004) JP  
60/560,620 9 April 2004 (09.04.2004) US  
2005-012590 20 January 2005 (20.01.2005) JP

(71) Applicant (for all designated States except US): **SHOWA DENKO PLASTIC PRODUCTS CO., LTD.** [JP/JP];  
9-10, Nihonbashi Horidome-cho, 1-chome, Chuo-ku.,  
Tokyo 103-0012 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MIZUO, Takayuki**

[JP/JP]; c/o Medix Showa Co., Ltd., 6864-2, Oaza Omachi.,  
Omachi-shi, Nagano 398-0002 (JP). **NAKAGAWA, Teru-  
aki** [JP/JP]; c/o Showa Denko K. K., Production Technol-  
ogy Center, 5-1, Ohkawa-cho, Kawasaki-ku, Kawasaki-  
shi, Kanagawa 210-0858 (JP). **MATSUMOTO, Nobuhiro**  
[JP/JP]; c/o Medix Showa Co., Ltd., 6864-2, Oaza Omachi.,  
Omachi-shi, Nagano 398-0002 (JP).

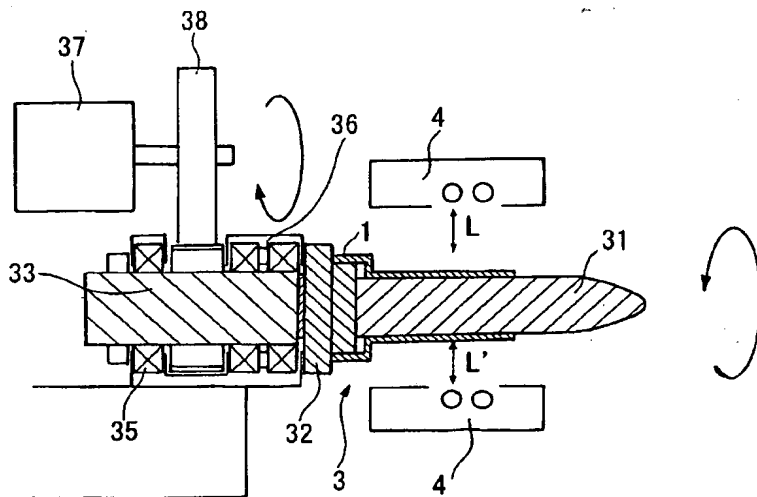
(74) Agents: **SHIGA, Masatake et al.**; 2-3-1 Yaesu, Chuo-ku,  
Tokyo 104-8453 (JP).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,  
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: **METHOD AND APPARATUS FOR PRODUCING BAG WITH MOUTH MEMBER**



(57) Abstract: A method is provided for producing a bag with a mouth member (1) by liquidtightly melt-bonding a mouth member (1) comprising a thermoplastic resin and a bag unit comprising a relatively soft flexible film (2), in which uniform surface temperature of the mouth member (1) is realized, generation of an A-shaped gap (22) is prevented, and a bag with a mouth member (1) excellent in the liquidtightness of the meltbonded part between the mouth member (1) and the bag unit is produced; and also a production apparatus therefor is provided. The method comprises a preheating step of heating a tubular mouth member (1) while rotating it around the cylinder axis thereof, and a melt-bonding step of inserting the heated mouth member (1) into the opening part of a bag unit and pressing, and thereby melt-bonding the mouth member (1) to the opening part of the bag unit.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*